

IN THE CLAIMS

1. (Original) Method in order to allowing to establish, during a dough-forming phase of a recipe-adapted dough structure, having rheological properties increasing over time in a dough mixer driven by an electric motor, in all events one value of a selected and employed correlation function, when the rheological properties of the dough structure exhibit a preset value, by means of allowing to detect current values of the supply current connected to the motor over time and in addition allowing to utilize means in order to evolve or calculate an envelope from the values of the supply current detected in this way, characterized in that, to allowing:

- a. to drive or proceed with the dough forming in the dough mixer to a dough structure, selected by an operator or the like, and regarded as suitable for a subsequent processing to a finished product having predetermined properties;
- b. to read one or more values, based on a calculation via the selected correlation function, and;
- c. simultaneously, or in all events substantially simultaneously, to stop the dough-forming phase and observe the rheological properties of the dough structure so that these exhibit the preset value.

2. (Original) Method according to claim 1, characterized in that the dough in the dough mixer becomes the subject of a plant-related processing, for the forming of a selected finished product, that the product manufactured in this way is tested, with regard to predetermined requirements, and that upon compliance between product and requirements the values, according to "b", are utilized as reference value.

3. (Original) Method according to claim 1, characterized in that the dough in the dough mixer should become the subject of a plant-related processing, for

the forming of a finished product, that the product manufactured in this way is tested, with regard to predetermined requirements, and that upon a deficiency or discrepancy of compliance between product and requirements the values are rectified or corrected, according to "b", and a new recipe-adapted dough structure is driven to the values rectified and corrected in this way, the dough in the dough mixer becoming the subject of a plant-related processing, for the forming of a selected finished product, that the product manufactured in this way is tested, with regard to predetermined requirements, and that upon a compliance between product and requirements, the values rectified and corrected in this way are utilized as reference values.

4. (Original) Method in order to allowing to establish, during a dough-forming phase of a dough structure (3) having time-related increasing rheological properties in a dough mixer (2) driven by an electric motor, a point of time (t_3) when the rheological properties of the dough structure exhibit a preset value, by means of allowing to detect current values of the supply current (4a) connected to the motor (4) over time during said dough-forming phase, and in addition allowing to utilize means in order to evolve or calculate an envelope (53,53') from the values of the supply current (4a') detected in this way, characterized in that:

- a. to time-related allowing to form a number of values ($K_1(t)$; $K_2(t)$), based on a calculation via a selected correlation function, by means of the evolved or calculated graph of said envelope;
- b. to allowing to stop the dough-forming phase upon the achievement of a preset value (the reference value) of the correlation function (K_1 , K_2), and;
- c. the value of the correlation function, determined in this way, is set in relation to the rheological properties of the dough structure.

5. (Original) Method according to claim 4, characterized in that said correlation function is selected as an auto-correlation function.

6. (Currently Amended) Method according to ~~claim 4 or 5~~ Claim 4, characterized in that the number of values, based on selected correlation function, are selected to two.
7. (Original) Method according to claim 6, characterized in that one value should be representative of a measure of central tendency or value.
8. (Original) Method according to claim 4, characterized in that said correlation function is selected as a cross-correlation function.
9. (Original) Method according to claim 4, characterized in that the time-dependent values of the supply current (4a') are evaluated by means of a time-shifted or phase-displaced current-detecting window.
10. (Original) Method according to claim 9, characterized in that the time duration within said window is selected from between 5 and 30 sec, such as between 10–15 sec.
11. (Currently Amended) Method according to ~~claim 4 or 9~~ Claim 4, characterized in that the values of the correlation function, within a time-related first window, are selected lower than the corresponding values in a window being subsequent in time.
12. (Original) Method according to claim 4, characterized in that one or more preset values of the correlation function are selected, inter alia, in dependence of a selected recipe, the construction of the dough mixer, the mixing and weight of selected ingredients and/or selected motor capacity.

13. (Currently Amended) Method according to ~~claim 4 or 12~~ Claim 4, characterized in that one or more preset values of the correlation function are selected, inter alia, in dependence of a subsequent plant-related processing, the structure of the plant and the like.

14. (Original) Arrangement in order to allowing to determine, during a dough-forming phase of a dough structure (3) having time-related increasing rheological properties in a dough mixer (2) driven by an electric motor (4), a point of time (t3) when the rheological properties of the dough structure exhibit a preset value, by means of allowing to detect current values (4a') of the supply current connected to the motor (4) over time during said dough-forming phase and in addition allowing to utilize a means (53), which is adapted to allowing to evolve or calculate an envelope from the values of the supply current (4a') detected in this way, characterized in that:

- a. a means (54) is adapted to time-related allowing to determine a number of values, based on a selected correlation function, by means of the evolved or calculated graph of said envelope;
- b. a means (55) is adapted to allowing to stop the dough-forming phase upon the achievement of a preset value (reference value) of the correlation function, and;
- c. the value of the correlation function determined in this way, according to "b", is allowed to become related to the rheological properties of the dough structure.

15. (Original) Arrangement according to claim 14, characterized in that said correlation function is constituted of an auto-correlation function.

16. (Original) Arrangement according to ~~claim 14 or 15~~ Claim 14, characterized in that the number of values, based on and obtained from the selected correlation function, are selected to two.

17. (Original) Arrangement according to claim 16, characterized in that one of these two values should be representative of a measure of central tendency or value.

18. (Original) Arrangement according to claim 14, characterized in that said correlation function is selected as a cross-correlation function.

19. (Original) Arrangement according to claim 14, characterized in that the time-dependent values of the supply current are evaluated via a means by means of a time-shifted or time displaced current-detecting window.

20. (Original) Arrangement according to claim 19, characterized in that the time duration within said window is selected from between 5 and 30 sec, such as between 10–15 sec.

21. (Original) Arrangement according to ~~claim 14 or 19~~ Claim 14, characterized in that the values of the correlation function, within a time-related first window, are adapted to be lower than corresponding values of a window being subsequent in time.

22. (Original) Arrangement according to claim 14, characterized in that one or more preset values of the correlation function are selected, inter alia, in dependence of a selected recipe, the construction of the dough mixer, the mixing and weight of selected ingredients and/or selected motor capacity.

23. (Original) Arrangement according to ~~claim 14 or 21~~ Claim 14, characterized in that one or more preset values of the correlation function are selected, inter alia, in dependence of a subsequent plant-related processing, the structure of the plant and the like.